TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference **01389 Neswal**	**FOR FURTHER ACTION**	See Form PCT/IPEA/416

International application No. **PCT/AT2004/000408**	International filing date *(day/month/year)* **19.11.2004**	Priority date *(day/month/year)* **21.11.2003**

International Patent Classification (IPC) or national classification and IPC

G06F9/445

Applicant

NESWAL, Peter

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of **16** sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

   a. ☐ *(sent to the applicant and to the International Bureau)* a total of _____ sheets, as follows:

      ☐ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

      ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

   b. ☐ *(sent to the International Bureau only)* a total of (indicate type and number of electronic carrier(s))

      _____ , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

   ☒ Box No. I   Basis of the report

   ☒ Box No. II   Priority

   ☐ Box No. III   Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   ☐ Box No. IV   Lack of unity of invention

   ☒ Box No. V   Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   ☐ Box No. VI   Certain documents cited

   ☐ Box No. VII   Certain defects in the international application

   ☒ Box No. VIII   Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY	International application No. PCT/AT2004/000408

Box No. I	**Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

    ☐ This report is based on translations from the original language into the following language _____ , which is the language of a translation furnished for the purposes of:

    ☐ international search (Rule 12.3 and 23.1(b))

    ☐ publication of the international application (Rule 12.4)

    ☐ international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

    ☐ the international application as originally filed/furnished

    ☒ the description:

        pages   **1-22** _____ as originally filed/furnished

        pages* _____ received by this Authority on _____

        pages* _____ received by this Authority on _____

    ☒ the claims:

        nos.   **1-25** _____ as originally filed/furnished

        nos.* _____ as amended (together with any statement) under Article 19

        nos.* _____ received by this Authority on _____

        nos.* _____ received by this Authority on _____

    ☒ the drawings:

        sheets   **1/8-8/8** _____ as originally filed/furnished

        sheets* _____ received by this Authority on _____

        sheets* _____ received by this Authority on _____

    ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

    ☐ the description, pages _____

    ☐ the claims, nos. _____

    ☐ the drawings, sheets/figs _____

    ☐ the sequence listing (*specify*): _____

    ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

    ☐ the description, pages _____

    ☐ the claims, nos. _____

    ☐ the drawings, sheets/figs _____

    ☐ the sequence listing (*specify*): _____

    ☐ any table(s) related to sequence listing (*specify*): _____

*   *If item 4 applies, some or all of those sheets may be marked "superseded."*

Box No. II	Priority

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:

   ☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).

   ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).

2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

   See Supplemental Box

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-17, 19-25		YES
	Claims	18		NO
Inventive step (IS)	Claims			YES
	Claims	1-25		NO
Industrial applicability (IA)	Claims	1-25		YES
	Claims			NO

2. Citations and explanations (Rule 70.7)

1.   This report makes reference to the following documents:

D1:   ANONYMOUS: "Software Distributor Administration Guide for HP-UX 11i, Edition 3" (2002-06)

D2:   BAILEY E C: "Maximum RPM - Taking the Red Hat Package Manager to the limit" (1998-06)

D3:   FRANKEN K: "Using RPM-SuperVisor, v1.11" (2001-11-06)

D4:   JACKSON I ET AL: "Debian Packaging Manual, version 3.2.1.0" (2000-08-24)

D5:   "SAFE MECHANISM FOR INSTALLING OPERATING SYSTEM UPDATES WITH APPLICATIONS", IBM TECHNICAL DISCLOSURE BULLETIN (1998)

D6:   US-A-5 845 077 (1998-12-01)

2.   The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claims 1-17 and 19-25 does not involve an inventive step (PCT Article 33(3)) and the subject matter of claim 18 is not novel (PCT Article 33(2)).

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2.1   Document D1 is considered to constitute the prior art closest to the subject matter of claim 1 and discloses (the references in parentheses are to that document):

a method for automatically (job scheduling, page 234) installing and configuring software components in a computer network (page 22, lines 1-12) that comprises a plurality of user's computers (*ibidem*) and at least one network resource (depot, page 27, lines 17-21) of installable software components (filesets, page 29, lines 15-22), it being possible for the successful installation of a software component to presuppose the presence or absence of another software component (page 34, lines 4-18), the method being characterised by the following steps:

(a) a framework (product, page 29, lines 4-12) is provided in the network resource (product is part of a bundle stored in the depot; page 28, line 17 – page 29, line 3) that includes a control packet (control scripts, page 29, lines 15-16) for each of the installable software components of the network resource and a list (product consists of a "collection of filesets" with associated control scripts, page 29, line 4) of control packets to be processed, [...]

at least one of the control packets comprising a routine for [...] installing [its corresponding] software component (preinstall, page 305, lines

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

30-32; and page 371, lines 15-29) in the user's
computer, and at least this control packet or one
of the other control packets comprising a routine
for configuring its corresponding software
component installed in a user's computer (page
305, lines 19-20; and page 373, lines 2-23);

(b) transmission of the framework to a user's
computer (page 27, line 17 - page 28, line 10; and
figure 1-1, page 28);

(c) processing of the list of control packets to
be processed with installation routines in the
user's computer by calling up their installation
routines (installation with swinstall, pages 64
ff. and option "defer_configuration" on page 252
and page 435, line 26 - page 436, line 4), and
reprocessing of the list of control packets to be
processed with configuration routines in the
user's computer, by calling up their configuration
routines (configuring your installation
(swconfig), pages 82 ff.).

Consequently, the subject matter of claim 1
differs from that known method in that

1. the framework does not include the software
   component itself;
2. the control packet installation routine also
   permits downloading its corresponding software
   component from the network resource;
3. at least step (c) is triggered by a local event

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

in the respective user's computer.

D1 indicates that the software installation method can also be started via the command line (page 55). It is well known to a person skilled in the art that under Unix commands can also be started automatically, for example at system start, by entries in corresponding local directories (e.g. /etc/rc2.d). Feature (3) therefore concerns only a conventional design option.

The problem addressed by the remaining features of the present invention can therefore be considered to be that of saving bandwidth when updating software components.

The solution proposed in claim 1 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons:

The feature, "first determine differences, then download missing software" is only one of several obvious possibilities from which a person skilled in the art would select to solve the stated problem, according to the circumstances, without being inventive; see, for example, D6.

2.2   Document D1 is considered to constitute the prior art closest to the subject matter of claim 7 and discloses (the references in parentheses are to that document):

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

a control packet that can be executed in an operating system of a user's computer for automatically installing and configuring, in a user's computer, software components available in a network resource (see observations on claim 1), the control packet being characterised in that it includes a reference to a software component in the network resource (Environment-Variables SW_LOCATION, SW-PATCH, etc.; pages 381 ff.) and at least one of the four following routines: a routine for installing said software component in the user's computer, a routine for de-installing said software component from the user's computer, a routine for configuring said software component installed in the user's computer, and a routine for cancelling (deconfiguring) the configuration of said software component in the user's computer (see observations on claim 1).

The subject matter of claim 7 therefore differs from the known method in that

each routine, after checking the requirement of the presence or absence of another software component, branches into the installation or de-installation routine of another control packet associated with the other software component.

The present invention can therefore be considered to address the problem of processing dependent software components in the same passage.

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

The solution proposed in claim 7 of the present application cannot be considered inventive (PCT Article 33(3)) for the following reasons:

It is generally known to a person skilled in the art that the feature "branching into routines of other software components" is equivalent to the feature "autoselect_dependencies, autoselect_dependents and autoselect_reference_bundles", which is known from document D1 (D1, page 430) and can be exchanged for the same whenever necessary.

2.3   The subject matter of the independent device claim 14 corresponds for the most part to the subject matter of the independent method claim 1 and therefore cannot be considered inventive (PCT Article 33(3)).

2.4   Document D1 discloses (the references in parentheses are to that document):

a client program (SD-UX daemon, page 190) that can be executed in a user's computer for automatically installing and configuring, in a user's computer (*ibidem*), software components available in a network resource, the program being characterised in that it receives and stores a framework as per claim 13 or 14 (*ibidem*), processes in a first passage the list of control packets to be processed by calling up their installation routines, and processes in a second passage the

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

list of control packets to be processed by calling up their configuration routines (see observations on claim 1).

The subject matter of claim 18 is therefore not novel (PCT Article 33(2)).

2.5   The same reasons (corresponding to the dependencies) analogously apply to independent claims 13, 16, 17, 24 and 25. The subject matter of these claims therefore does not involve an inventive step (PCT Article 33(3)).

2.6   Dependent claims 2-6, 8-12, 15 and 19-23 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT inventive step requirements: insofar as they do not relate to routine measures which are obvious to a person skilled in the art, they are not inventive in relation to the combination of the concepts described in document D1 with those described in documents D2-D6 (see the corresponding passages indicated in the search report).

3.   The following observations are also made:

3.1   A person skilled in the art aware of documents D1-D6 cited in the search report would be able to combine their features, as described in claim 1 of the application, without being inventive.

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

3.2   The majority of the search report citations proceeds either from centrally initiated actions or from actions initiated in a decentralised manner. The users are free to determine how they want to administer their systems.

Thus D1 describes (pages 58 ff.) that the command "swinstall" has an optional parameter, "targetB", i.e. the specification of the software installation target. According to D1, however, this parameter is optional and is set by default to "local host".

D2 describes only the execution of the shell command "rpm-i" (pages 15 ff.), which can obviously occur, for a person skilled in the art, both locally or from a remote location. The actions are thus not necessarily initiated centrally.

As final example, reference is made to D3, which proposes (on page 8, paragraph 3.6) a daily Cronjob, which thus automatically adjusts each system after booting.

D6 may be in this context the only centrally initiated action method.

3.3   The framework known from D1 (product, page 29) consists in "collections of filesets or (optional) subproducts and control scripts". That "product" is located in a "depot" (page 27) which could be

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |

located, for example in the local computer: the parameter "-s source" of the command "swinstall" has the syntax [host:][/directory] and can thus refer to any computer (page 73, last paragraph – page 74 – first paragraph).

It is therefore obvious to a person skilled in the art that the framework in its totality can be locally available and hence that a local and autonomous decision-making is possible, without an additional inventive step.

The same occurs in the methods described in D2 and D3: the rpm command can read the framework of any computer, in particular the local computer.

3.4   In D1 and D2, the information levels can also be locally stored, for example: in D1, the local directory "/var/adm/sw/products" is used for that purpose (page 490), and in D2 "/var/lib/rpm" (page 32). As this is normally the case of Unix or Linux, that directory can of course be configured (D2, page 32).

3.5   D3 shows on page 8, paragraph 3.6, that a manual decision is not always necessary, for example when the automatic update is carried out by a Cronjob. Moreover, the automatic and timed execution of commands under Linux is well known to a person skilled in the art. The need to carry out an external process for that purpose, instead of a process provided by the solution itself, is an

| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |

obvious and non-inventive design alternative.

3.6   The strict separation between software components and their associated control packets is an obvious design alternative for a person skilled in the art, for example when providing installation packets: the transmission of installation and test scripts on the one hand and of the actual software components to be installed on the other hand is a well known possibility.

Box No. VIII	Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

1.   Contrary to PCT Article 6, claim 18 is not supported by the description because its scope goes beyond the scope justified by the description and the drawings. The reasons therefor are as follows:

According to the description (page 12, line 31 – page 13, line 10), each control packet comprises at least one of the following routines: installation, de-installation, configuration, deconfiguration. In the above-mentioned claims, the list of control packets is always processed twice: the first time by calling up the installation routine and the second time by calling up the configuration routine. Consequently, both the installation and the configuration routines appear to be absolutely necessary. However, this is inconsistent with the description.

2.   The expression used in claims 3 and 14, "detector of all possible conditions" is vague and unclear and leaves the reader uncertain about the meaning of the technical feature in question. As a result, the definition of the subject matter of these claims is unclear (PCT Article 6).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**

Continuation of:

BOX II

Priority

1.   Claims 7, 13, 14, 16, 17, 28 and 24 are covered by the claimed priority, since their technical content is contained in the priority document EP03450257. The remaining independent claims (1 and 25) are **not** covered by the claimed priority, since their technical content goes beyond the subject matter disclosed in the above-mentioned priority document. The reasons therefor are as follows:

According to the claimed priority, as explained on page 11, lines 8-22, of the description, each control packet (RP) includes at least one of the following four routines:

- "INST()" (4), for installing the associated software component in a user's computer (2),
- another routine, "DEINST()" (4'), for de-installing said software component from the user's computer (2),
- a routine, "CONFIG()" (5), for configuring said software component; and
- a routine, "DECONFIG()" (5'), for cancelling ("deconfiguring") the configuration of said software component.

A routine for downloading (and installing), as

Supplemental Box

defined in claim 1, is neither mentioned nor associated with an RP in the entire priority application.

Moreover, it is not unambiguously stated that the control packets necessarily also download the software components to be installed from the network resource. Downloading could also take place, for example, before installation, by copying the data from the network resource.

Since both features (routine in the priority application and in claim 1 of the present application) bear the same reference number (4), it is assumed that they relate to the same feature.

In that case, however, the functional scope of the original feature (installation routine) would go beyond the priority application, thus contravening PCT Rules 43*bis*.1 and 64.1.